

Amendments to the Drawings

The attached sheet of amended replacement drawings includes changes to FIG. 1 in which reference number 26 is deleted. This sheet, which includes only FIG. 1, replaces all previous drawing sheet including FIG. 1.

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the amendments set forth above and the remarks below.

Pending claims 1-6 stand rejected. Claims 1, 2, 4, and 6 are herein amended. New claims 7 and 8 are herein added.

Requirement Under Rule 1.105

In accordance with the requirement made by the Examiner under 37 CFR 1.105, copies of Korean utility model registration No. 221534 and Korean patent registration No. 310891 are enclosed herewith.

Drawing Objections

The Examiner objects to Figure 1 on the basis that item 26 is not shown. Applicant encloses amended drawing sheet 1 to remove reference number 26.

Specification Objections

The disclosure is objected to due to a typographical error on page 9, line 20 with respect to the protrusion referred to in Figure 1, item 6. As noted by the Examiner, the specification is amended to recite item 5.

35 U.S.C. §112, First Paragraph

The Examiner indicates that the sentence at page 6, line 15 is not clear. The paragraph is amended as set forth above for clarification.

35 U.S.C. §112, Second Paragraph

The Examiner makes a series of rejections set forth on page 4 of the present Office Action. Applicant amends claims 1, 2, 4, and 6 as set forth above to address the rejections.

The Prior Art Rejections

The Examiner rejects Claims 1 and 2 under 35 U.S.C. §102(b) as being anticipated by Yoshii (JP 5812398).

Claim 1 is amended to require a subminiature bone conduction speaker using a vibrating plate comprising a mastoid to transmit a vibration to a skull of a user for stimulating an auditory nerve of the user.

In contrast, Yoshi teaches that contact chip 16 receives vibration signals from the skin of a user. The contact chip does not contact the skull since a sound is transmitted to a tympanum of the ear as an air vibration through a sound wave guide 23 (FIG. 7).

More particularly, Yoshi discloses a device that allegedly allows a user to recognize a sound. When an electrical signal corresponding to a sound wave is applied to an operation coil 17 through a lead wire 26, the suspension 34 and the case 31 are mechanically vibrated in accordance with the electrical signal, and the magnet 20, including the magnetic core 21 and the inner case 37, are also vibrated in accordance with the mechanical vibration of the suspension 34 and the case 31. The vibration of the magnet 20 and the inner case 37 causes a vibration of the air in the inner case 37, and the air vibration is transmitted to the tympanum of the user's ear through the sound wave guide tube 23. Accordingly, the sound is transmitted as a vibration of a tympanic membrane, and the vibration of a tympanic membrane is transmitted to auditory nerves of the user to thereby allow the user to recognize the sound.

As disclosed, for example, on page 11, lines 5-10 of the specification, the sound wave causes the mastoid to vibrate and the vibration of the mastoid is transmitted to the user's skull bone to thereby stimulate the user's auditory nerves. That is, according to the bone conduction speaker of the present invention, the sound is transmitted not as the vibration of a tympanic membrane but as the vibration of the user's skull bone. Therefore, the mastoid in Claim 1

necessarily makes contact with the user's skull, and the auditory nerves are stimulated by the vibration of the skull, which is clearly different from the contact chip 16 of Yoshii.

Notwithstanding the above, claim 2 is amended to clarify that a "howl-prevention hole is positioned in at least one of the mastoid and the auxiliary vibrating plate, thereby preventing a howling effect at the ears of the user." This amendment is not made for reasons of patentability, but rather, to clarify the claim language in view of some translation artifacts.

In addition, in view of the Examiner comments on claim 2 Applicant provides the following. The Examiner alleges that the hole 19 of Yoshi (taking into account some confusion with reference number 16 in FIG. 7) teaches the howling preventing hole of claim 2. The hole 19 in Yoshi is formed at a support member 18 for securing the magnet 20 to the inner case 37 for transmitting the air vibration in the inner case 37 to the user's ear. In contrast, the howl-preventing hole of amended claim 2 prevents a howling effect at the user's ear.

Claim 3 is rejected under §103 over Yoshi. Claim 4 is rejected under §103 over Yoshi and Borwick. Claims 5 and 6 are rejected under §103 over Yoshi and Han.

Applicant submits that claims 3-6 are patentably distinguishable for at least the reasons discussed above with regard to the rejection of claim 1. Applicant further submits that Borwick and Han, taken alone, or in combination, overcome any of the deficiencies of Yoshi set forth above.

In view of the above Amendment, Applicants submit that claims 1-6 are in condition for allowance for which a notice of allowance is respectfully requested. Consideration of new claims 7 and 8 is respectfully requested.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Amendment or this application.

Applicant does not acquiesce to any assertion made by the Examiner not specifically addressed herein.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845, including but not limited to, any charges for extensions of time under 37 C.F.R. §1.136.

Respectfully submitted,

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